

① Installation + check-out completed 22 July 64.

2. Service call - 13 Aug 64 - Drift, non-repeatability, erratic count.

3. Service call - 16-17 Sept 64 - for following:

2 Sept Repeatability out - both axis.

3 Sept. No count - either axis.

8 Sept. - y axis operating after 2 hour warmup. No x axis output.

STAT

16-17 Sept. [] Replaced RF Oscillator in both axis. -

Should eliminate drift. Added line regulator for x & y interferometers.

Insufficient capacity to handle both interferometers + pumps. Burned out. Will replace with higher amperage regulator. Added master power switch to rear of control console.

STAT

⑥ Oct [] in - "y" axis out. - Fix made - apparently heat from increased room temp plus x axis power unit caused failure. All circuits checked + operating. Fan placed behind temporarily.

7 Oct. - ~~x~~ axis out - about 1/2 signal as compared with y at check points.

STAT

No signal at all at counter leads. Called [] 8 Oct. He will review symptoms + call back.

STAT

13 Oct - [] Trouble he feels is temperature variance. Just to operate @ 68 ± 2° - Impossible.

STAT

Declass Review by
NIMA / DoD

14 Oct - Just operating fine - no fix made. On line operation demonstrated to PDS + PID []

15 Oct - Inoperative in both x & y. No lamp on x interferometer.

16 Oct - X axis inoperative - no count signal. Y axis erratic

Photocell output & axes ~~proper~~ pulse to counter. Y axis pulsing both directions on one line. Other line OK. Noon - Y axis now operating.

Ray:

I exchanged the [] Oscillator in both the "X" and "Y" axes. The new units have an [] shield enclosure and [] filters. This was related to your drift problem. The line regulator I brought down did not have the capacity to handle both "X" and "Y" Interferometer electronics plus the two cooling pumps. I hadn't anticipated that the pumps would have to work off this line also. I am going to get you another regulator with a higher amperage rating that will fit directly on the mounting plate of the old unit. Do not use this regulator for any other use as I believe it is damaged from overheating. I will phone you tomorrow and discuss the modifications in greater detail.

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STAT

1. New [] Oscillators (x & y)
2. Line Regulator for Interferometers - too low amperage rating
3. Power switch

INITIALIZE⁰ TWX
SPECIFY MODE

SPECIFY
INITIALIZE TWX
INITIALIZE TWX

INITIALIZE TWX

SPECIFY MODE

SPECIFY

SPECIFY MODE

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STAT

Sept 64

- 2 September 64 - Repeatability count out in both axis
- 3 Sept. 64 - Both axis out - no count. Shut down -
Brooks on Annual.
- 8 Sept 64 - Y axis operating after two hour warm-up.
Checked ☐ - amplitude output OK.
- X axis - no count - output amplitude reads
2 Volts. Should be 8 Volts.
- 9 Sept - ☐ will be down
16 or 17 to retrofit and adjust inst.

STAT

STAT

STAT

1. Extremely long warm-up period required. ~~Heating~~
elements for inter ferometers.

6 Aug

2. Interferometers apparently mis-matched or mis-aligned - Y axis maintains fast count with gross handwheel while X axis loses fast count with gross hand wheel. Both should function alike.

Hold

3. Positive pressure system in instrument to alleviate smoke and dirt contamination of the optics.

Hold

4. Positive connectors required on x & y connections to CMC.

5. Manual not an operational nor maintenance aid. Simply words & photos.

6. Spare Parts list incomplete. No pricing, etc.

Will wait until further along w/contract.

7. Dwg's required for changes - Prototype to production models.

8. Costing of recommended changes (Letter of 23 July)

9. Fasteners on external panels.

10. Exterior wired fuses w/ indicator lamps.

7 Aug

11. Y Axis - add count in fwd. & reverse

- Continues to add randomly after warm-up.
- Settled down after six hours.

X axis - exceeds count -

- Accumulates randomly all day - never settled down.

- X Count unoperable all day.

- X count not comparable with Y count - slower
by 30 to 1.